

We claim:

1. A method for identifying a therapeutic having analogous activity to a thiazolidinedione comprising contacting a cell containing a PPAR γ receptor with a candidate therapeutic; and determining the level of expression of at least one gene selected from the panel of genes in 5 Table I and/or Table II, wherein an increase in the level of expression of at least one gene of Tables I or III and/or a decrease in the level of expression of at least one gene of Tables II or IV in the cell treated with the candidate therapeutic relative to a cell that was not treated with the candidate therapeutic indicates that the candidate therapeutic is a therapeutic for treating a disease associated with a PPAR γ receptor.
- 10 2. The method of claim 1, wherein said candidate therapeutic is selected from the group consisting of: proteins, peptides, peptidomimetics, derivatives of fatty acids, and small molecules.
3. The method of claim 1, wherein said disease is Type II diabetes.
4. The method of claim 1, wherein said disease is obesity.
- 15 5. The method of claim 1, wherein said disease is treatable by a thiazolidinedione.
6. The method of claim 1, wherein said PPAR γ receptor is the PPAR γ 1 receptor.
7. The method of claim 1, wherein said PPAR γ receptor is the PPAR γ 2 receptor.
8. The method of claim 1, wherein said candidate therapeutic is in a library of compounds.
9. The method of claim 1, wherein the expression level of at least three genes is detected.
- 20 10. The method of claim 1, wherein the expression level of at least ten genes is detected.
11. A composition comprising a plurality of genes or gene fragments selected from the panel of genes in Tables I - IV.
12. The composition of claim 11, wherein the plurality is at least 10 genes or gene fragments.
13. The composition of claim 12, wherein the plurality is at least 20 genes or gene fragments.
- 25 14. The composition of claim 12, which is a chip, wafer or slide.

15. A composition comprising a plurality of proteins or protein fragments selected from proteins encoded by the panel of genes in Tables I - IV.
16. The composition of claim 15, wherein the plurality is at least 10 proteins or protein fragments.
- 5 17. The composition of claim 16, wherein the plurality is at least 20 proteins or protein fragments.
18. The composition of claim 15, which is a chip, wafer or slide.
19. A method for determining whether a subject is responsive to treatment with a therapeutic having analogous activity to a thiazolidinedione, comprising determining the level of expression of a plurality of genes of Tables I or III or Tables II or IV in cells of the subject, wherein a higher level of expression of the genes of Tables I or III or a lower level of expression of the genes of Tables II or IV in the adipocytes of the subject relative to that in adipocytes of a subject that was not treated with a PPAR γ ligand indicates that the subject is responsive to treatment with the PPAR γ ligand.
- 10 20. A method of claim 19, wherein the cells are adipocytes.
21. A method for predicting whether a subject would be responsive to treatment with a compound having analogous activity to a thiazolidinedione, comprising incubating cells of the subject with a PPAR γ ligand and determining the level of expression of a plurality of genes of Tables I and/or III and/or Tables II and/or IV in the cells, wherein a higher level of expression of genes of Tables I or III or lower level of expression of genes of Tables II or IV relative to expression in cells of subjects not treated with a PPAR γ ligand indicates that the subject would be responsive to treatment with the PPAR γ ligand.
- 20